9   the matrix notation comprising at least an index for each dimension
10   of the array;
11   taking a sample from each of the multiplicity of biological
12   fluid donations;
13   mapping each sample to a respective particular one of each
14   element of the matrix, each individual sample identified by its
15   corresponding element's respective matrix notation;
16   taking aliquots from each sample, the number of aliquots
17   taken from each sample defined by the number of dimensions
18   characterizing the matrix;
19   forming subpools from the aliquots of each sample, each
20   subpool containing an aliquot from all samples identified by a matrix
21   notation in which one dimensional index is fixed, each respective
22   subpool identified by said fixed dimensional index;
23   providing the subpools to a [PCR] high-sensitivity testing
24   facility, wherein all of the subpools are tested for viral indication
25   in a single [PCR analysis] high-sensitivity test cycle;
26   determining the respective fixed dimensional indices of
27   subpools which return a positive viral indication; and
28   combining said fixed dimensional indices into a matrix
29   notation, thereby unambiguously identifying a unique matrix element
30   defined by the matrix notation, thus unambiguously identifying a
31   uniquely viral positive sample.

1   4,12.   (Amended)   The method according to claim 11, wherein the
2   subpool formation step further comprises:
3   forming subpools of aliquots from samples identified by
4   identical r indices but different c and s indices;
5   forming subpools of aliquots from samples identified by
6   identical c indices but different r and s indices;
7   forming subpools of aliquots from samples identified by
8   identical s indices but different r and c indices; and
9   evaluating each of the r, c, and s subpools for a viral
10   positive indication returned by [PCR] high-sensitivity testing.

1   18. (Amended) A method for uniquely identifying viral positive

2 biological fluid donations in the fewest number of [PCR analysis]

3 high-sensitivity test cycles, the method comprising:

4   providing a multiplicity of biological fluid donations;

5   defining an n-dimensional matrix, where n is an integer, the

6 matrix further comprising a multiplicity of [internal] elements, each

7 element defined by an intersection of the n-dimensions of the matrix,

8 where each individual element identified by a respective matrix

9 notation $X_{i...N}$, wherein the subscript of the matrix notation defines

10 the dimensional indices of the array;

11   taking N aliquots from each sample of each of the

12 multiplicity of biological fluid donations, the number of aliquots

13 taken from each sample defined by the number of dimensional indices

14 comprising the array;

15   forming subpools from the aliquots of each sample, each

16 subpool comprising an aliquot from all of the samples identified by

17 a matrix notation in which one dimensional index is fixed;

18   providing the subpools to a [PCR] high-sensitivity testing

19 facility, wherein all of the subpools are tested for viral indication

20 in a first [PCR analysis] high-sensitivity test cycle; and

21   evaluating the dimensional indicia of each subpool which

22 returned a viral positive indication in the first [PCR analysis] high-

23 sensitivity test cycle, in accordance with a reduction by the method

24 of minors, the evaluation identifying a unique element defined by the

25 dimensional indicia of each positive subpool if only a single subpool

26 representing each dimensional index returns a positive viral

27 indication,, thus unambiguously identifying a viral positive sample.

1   22. (Amended) The method according to claim 21, further

2 comprising the step of taking an additional aliquot from each sample

3 identified to each of the z^n viral positive candidate elements:

providing the aliquots to a [PCR] <u>high-sensitivity</u> testing facility, wherein all of the aliquots are tested for viral indication in a second [PCR analysis] <u>high-sensitivity test</u> cycle; and

unambiguously identifying all viral positive samples.

-- 28. The method according to claim 9 wherein the high-sensitivity test is a PCR test. --

-- 29. the method according to claim 3 wherein the high-sensitivity test is a PCR test. --

-- 30. The method according to claim 9 wherein the high-sensitivity test is a PCR test. --

-- 31. The method according to claim 10 wherein the high-sensitivity test is a PCR test. --

-- 32. The method according to claim 19 wherein the high-sensitivity test is a PCR test. --

REMARKS

Claims 9-32 are in the application, with claims 9, 12, 18 and 22 having been amended and claims 28-32 added. Of the claims under consideration, claims 9 and 18 are the independent claims. Reconsideration and further examination are respectfully solicited.

Claims 9-27 were rejected under the judicially created Doctrine of Obviousness-type double-patenting over claims 1-10 of U.S. Patent No. 5,780,222.

Since the present application is a division of U.S. Patent Application Serial No. 08/778,610, now U.S. Patent No. 5,780,222 which is commonly owned by the assignee of the present invention, Applicants submit herewith a terminal disclaimer in compliance with 37 CFR § 1.321(c).